

## CLAIMS

1. A computer automated process for complete vectorization of bitmap images wherein the central processing unit of a computer programmed with the appropriate instructions analyses the lines in the bitmap images, intersections and shapes associated with the lines in the bitmap image and processes the same sequentially in accordance with predefined algorithms to create a complete vectorized image of the lines together with all intersections and shapes associated with those lines.
2. A computer automated process as claimed in claim 1 above wherein the central processing unit sequentially analyses in accordance with a predefined algorithm each black pixel in the bitmap image to determine a segment of a line which has no intersections and wherein the distortion due to noise is within predefined limits.
3. A computer automated process as claimed in claim 2 above wherein the central processing unit scans the segment of line from the first black pixel which has no intersections and wherein the distortion due to noise is within predefined limits in each direction of the line and wherein the position, length and direction of the line is determined in accordance with a predefined algorithm and wherein the position, length and direction of the line is then converted to a vector to create a vectorized image of the line corresponding with the bitmap image.
4. A computer automated process as claimed in claim 3 above wherein the central processing unit analyses all intersecting lines detected along the

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line in accordance with a predefined algorithm and wherein the direction, position and length of the intersecting lines are determined in accordance with a predefined algorithm and wherein the direction, position and length of the intersecting lines is then converted to a vector to create a vectorized image of the intersecting lines corresponding with the bitmap image.

5. A computer automated process as claimed in claim 4 above wherein all lines and intersections associated with that line detected by the central processing unit from the bitmap image are deleted from the bitmap image once they have been vectorized by the central processing unit and wherein the central processing unit then repeats the entire process as claimed hereinabove to vectorize all subsequent lines and intersecting lines.

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